

REALISTIC®

# Service Manual

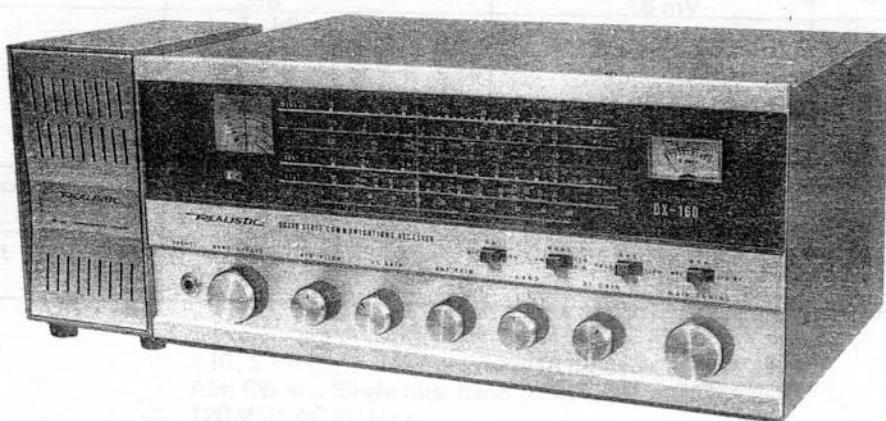
701-07

SECOND EDITION

DX-160

**SOLID STATE  
FIVE BAND  
COMMUNICATIONS RECEIVER**

Catalog Number: 20-152



This service manual is relevant to products manufactured after APR 20, 1975  
(After serial number 418411 for U.S.A., 417544 Canada, 429012 for  
Australia, Belgium and U.K.)

CUSTOM MANUFACTURED FOR RADIO SHACK  A TANDY CORPORATION COMPANY

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## SPECIFICATIONS

SPECIFICATIONS DOCUMENT INSTRUCTIONS YJEM32A20

Description	Condition	Nominal Spec.		Limit Spec.	
Frequency coverage	Band A	145	– 405 kHz	150	– 400 kHz
	Band B	520	– 1610 kHz	535	– 1605 kHz
	Band C	1.47	– 4.55 MHz	1.5	– 4.5 MHz
	Band D	4.3	– 13.2 MHz	4.5	– 13 MHz
	Band E	12.7	– 30.2 MHz	13	– 30 MHz
Sensitivity (S+N)/N = 10 dB Output = 50 mW (Thru I.E.C. Dummy ANT.)	250 kHz	50	μV	200	μV
	1 MHz	100	μV	300	μV
	2.5 MHz	3	μV	10	μV
	7 MHz	4	μV	10	μV
	21 MHz	4	μV	10	μV
Selectivity	–6 dB	4	kHz	4.5	kHz
	–40 dB	18	kHz	20	kHz
Image ratio (Thru I.E.C. Dummy ANT.)	250 kHz	48	dB	40	dB
	1 MHz	65	dB	50	dB
	2.5 MHz	45	dB	40	dB
	7 MHz	35	dB	30	dB
	21 MHz	15	dB	10	dB
Signal-to-Noise ratio	1 mV at 7 MHz				
	AM	50	dB	40	dB
	SSB	40	dB	30	dB
Intermediate frequency		455	kHz	455	±2 kHz
B.F.O. pitch		±2.5	kHz	±2	kHz
AVC action	50 μV to 20 mV at 7 MHz	±6	dB	±10	dB
Audio frequency response	AM: 300 Hz to 3 kHz	–6	dB	+3,	–10 dB
	SSB: 300 Hz to 3 kHz	–6	dB	+3,	–10 dB
Audio output power	Less than 10% T.H.D.	700	mW	500	mW
Hum and noise	AF Gain Minimum				
	AM	4.5	mV	10	mV
	SSB	6	mV	10	mV
Power drain	1. Idling AC 120V, 60 Hz	3	W	4	W
	DC 12V	30	mA	60	mA
	2. Full power AC 120V, 60 Hz	6	W	10	W
	DC 12V	180	mA	300	mA
Dial calibration accuracy	Main Tuning Bandspread	±1 %		±3 %	
		±0.1 %		±0.5 %	
Oscillator drop-out	AC	80	V	100	V
	DC	7	V	9	V

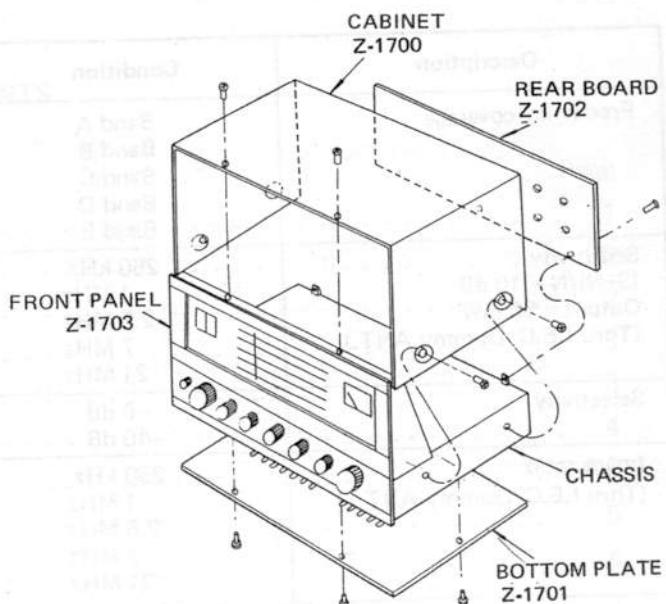
Semiconductors	: 1 IC, 5 FET's, 7 transistors and 15 diodes
Reception	: AM, CW and Single Side Band (USB/LSB)
Power source	: 120 Volt AC 60 Hz or 12 Volt DC negative ground only.
Antenna	: Low impedance
Phone jack matching impedance	: More than 8 ohm
Operating temperature	: 0°C to 40°C
Dimensions	: 6-9/16"(H) x 14-1/5"(W) x 8-7/8"(D)
Weight	: 16 lbs.

**NOTE:** Nominal Specs represent the design specs; all units should be able to approximate these — some will exceed and some may drop slightly below these specs. Limit Specs represent the absolute worst condition which still might be considered acceptable; in no case should a unit perform to less than within any Limit Spec.

# DISASSEMBLY

## DISASSEMBLY INSTRUCTIONS

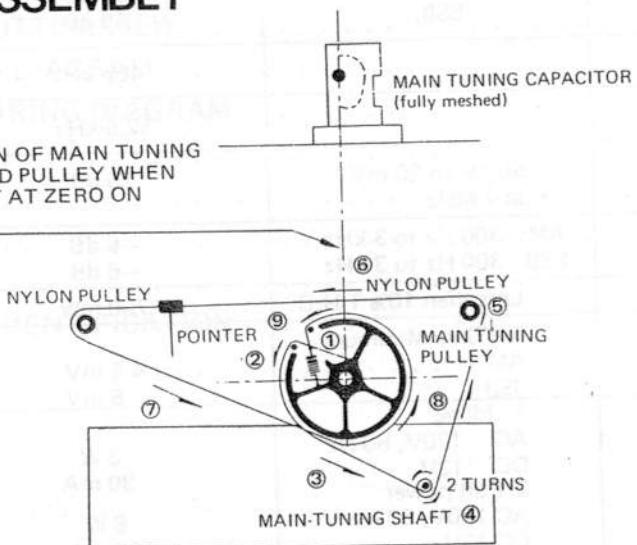
1. Remove 6 screws from bottom plate.
2. Remove 6 screws from rear board.
3. Remove 4 screws holding cabinet.



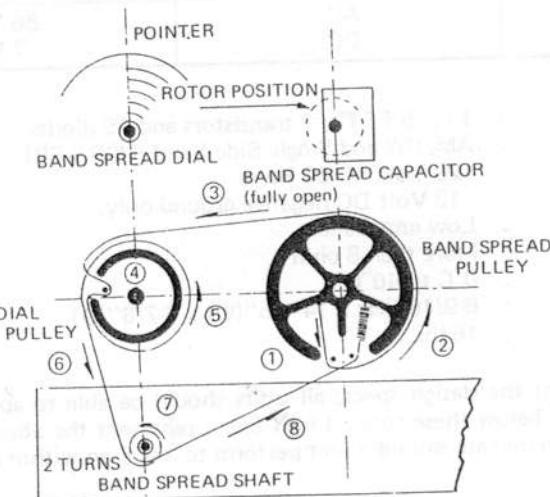
## DIAL STRING ASSEMBLY

### MAIN TUNING

NOTE: POSITION OF MAIN TUNING CAPACITOR AND PULLEY WHEN  
POINTER IS SET AT ZERO ON  
LOG SCALE



### BAND SPREAD



NOTE: THE POSITION OF BAND SPREAD DIAL, BOTH PULLEYS  
AND BAND SPREAD CAPACITOR PLATES.

# GENERAL ALIGNMENT INSTRUCTIONS

Test instrument required:

1. Signal Generator (150 kHz – 30 MHz)
2. I.E.C. Dummy antenna
3. AC VTVM
4. Oscilloscope

## PREPARATION FOR DIAL TRACKING ALIGNMENT

Note 1: Before attempting alignment, warm up the test instrument and the receiver for a minimum of 15 minutes to allow the components to stabilize.

Note 2: During alignment, reduce the signal generator output as the VTVM readings become higher. Always use the lowest signal generator output.

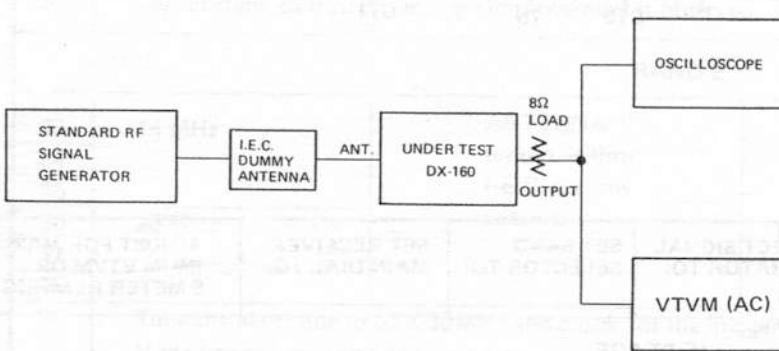
Note 3: A non metallic alignment tool is required for complete alignment.

Note 4: Before alignment confirm that, when the **MAIN TUNING** knob is rotated fully counterclockwise (main tuning capacitor fully meshed) the dial pointer rests exactly on the 0 mark on the **LOG** scale.

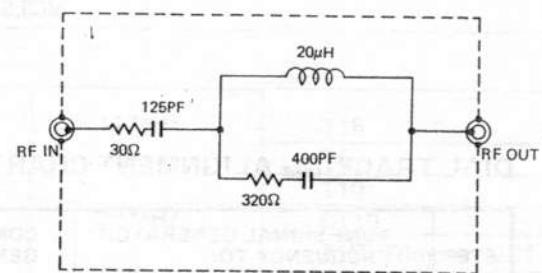
Step 1: Set the front panel controls as follows:

BAND SPREAD	— Fully clockwise (fully open).
AF GAIN	— Adjust as necessary during alignment
RF GAIN	— Fully clockwise
MODE SW	— AM position
OPR SW	— REC position

## ALIGNMENT SET-UP DIAGRAM

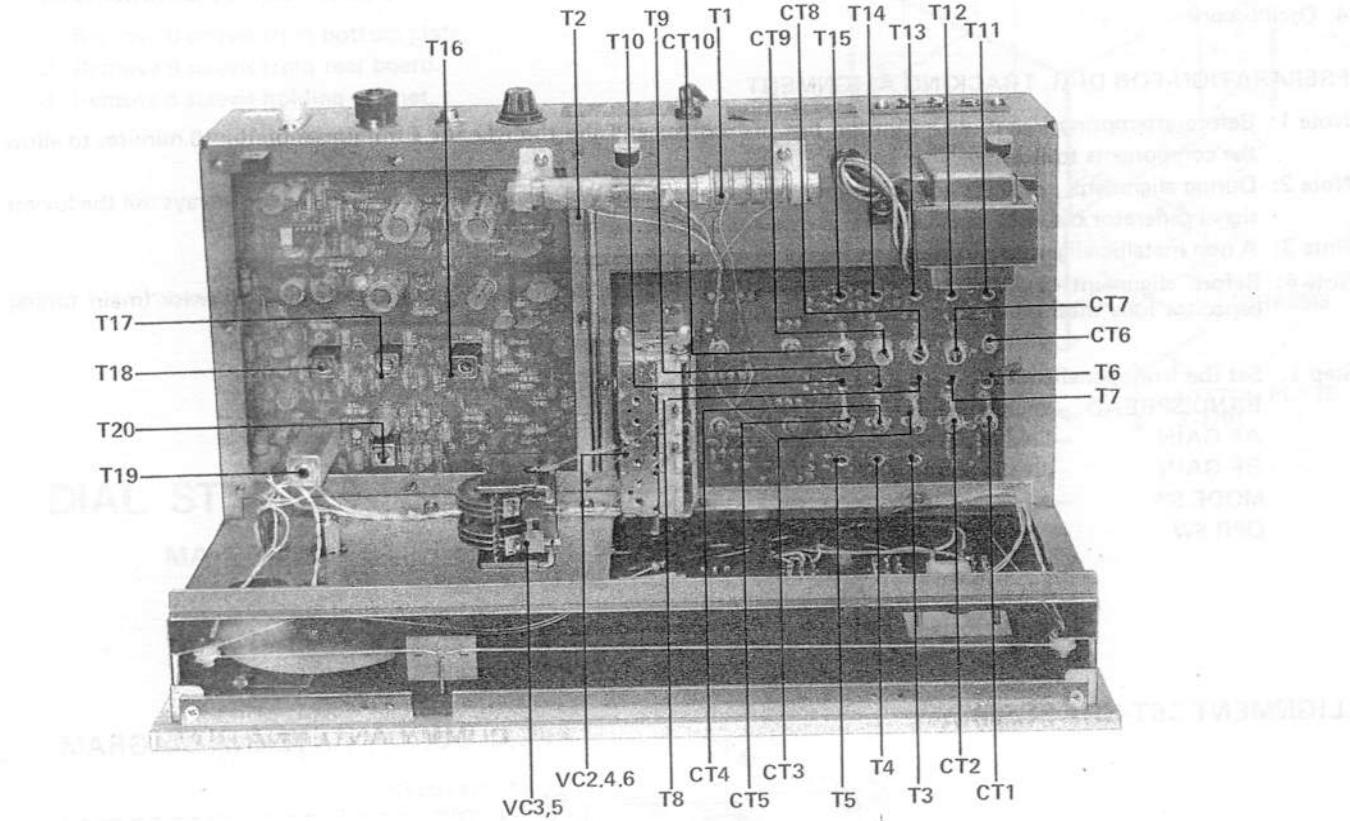


## I.E.C. DUMMY ANTENNA DIAGRAM



## ALIGNMENT POSITIONS

## DISASSEMBLY INSTRUCTIONS



## DIAL TRACKING ALIGNMENT CHART

STEP	TUNE SIGNAL GENERATOR FREQUENCY TO: (MODULATION 1 kHz 30%)	CONNECT SIGNAL GENERATOR TO:	SET BAND SELECTOR TO:	SET RECEIVER MAIN DIAL TO:	ADJUST FOR MAXIMUM VTVM OR S METER READING:			
IF STAGE								
1	455 kHz	Across VC3 or VC4 thru a 0.01 $\mu$ F capacitor	E	30 MHz	T16 (RED)			
2					T17 (WHT)			
3					T18 (BLK)			
4	Repeat Steps 1 thru 3.							
BAND A								
5	170 kHz	ANTENNA terminals thru I.E.C. dummy antenna	A	170 kHz	T11 (OSC coil)			
6					T1 (ANT coil)			
7					T6 (RF coil)			
8				380 kHz	CT6 (OSC trimmer)			
9					ANT Trimmer, VC1			
10					CT1 (RF trimmer)			
11	Repeat steps 5 thru 10 until no improvement is observed.							

BAND B							
12	600 kHz	ANTENNA terminals thru I.E.C. dummy antenna	B	600 kHz	T12 (OSC coil)		
13						T2 (ANT coil)	
14						T7 (RF coil)	
15	1400 kHz					1400 kHz	CT7 (OSC trimmer)
16							ANT Trimmer, VC1
17							CT2 (RF trimmer)
18	Repeat steps 12 thru 17 until no improvement is observed.						
BAND C							
19	1.7 MHz	ANTENNA terminals thru I.E.C. dummy antenna	C	1.7 MHz	T13 (OSC coil)		
20						T3 (ANT coil)	
21						T8 (RF coil)	
22	4 MHz					4 MHz	CT8 (OSC trimmer)
23							ANT Trimmer, VC1
24							CT3 (RF trimmer)
25	Repeat steps 19 thru 24 until no improvement is observed.						
BAND D							
26	5 MHz	ANTENNA terminals thru I.E.C. dummy antenna	D	5 MHz	T14 (OSC coil)		
27						T4 (ANT coil)	
28						T9 (RF coil)	
29	12 MHz					12 MHz	CT9 (OSC trimmer)
30							ANT Trimmer, VC1
31							CT4 (RF trimmer)
32	Repeat steps 26 thru 31 until no improvement is observed.						
BAND E							
33	14 MHz	ANTENNA terminals thru I.E.C. dummy antenna	E	14 MHz	T15		
34						T5	
35						T10	
36	28 MHz					28 MHz	CT10
37							ANT Trimmer, VC1
38							CT5
39	Tune the generator to 27.090MHz and check for the image frequency. If the image frequency does not appear at this point, repeat steps 33 thru 38, being careful to align to the correct frequency.						

Note: The image frequency is 910 kHz above the signal frequency on Bands A, B, C and D, and 910 kHz below the signal frequency on Band E.

## BFO ALIGNMENT

Note: Confirm that the BFO capacitor is fully meshed when the BFO control is at 9 o'clock. If not, reset the knob on the shaft.

Step 1: Set MODE switch to SSB/CW. Set BFO to the one o'clock position.

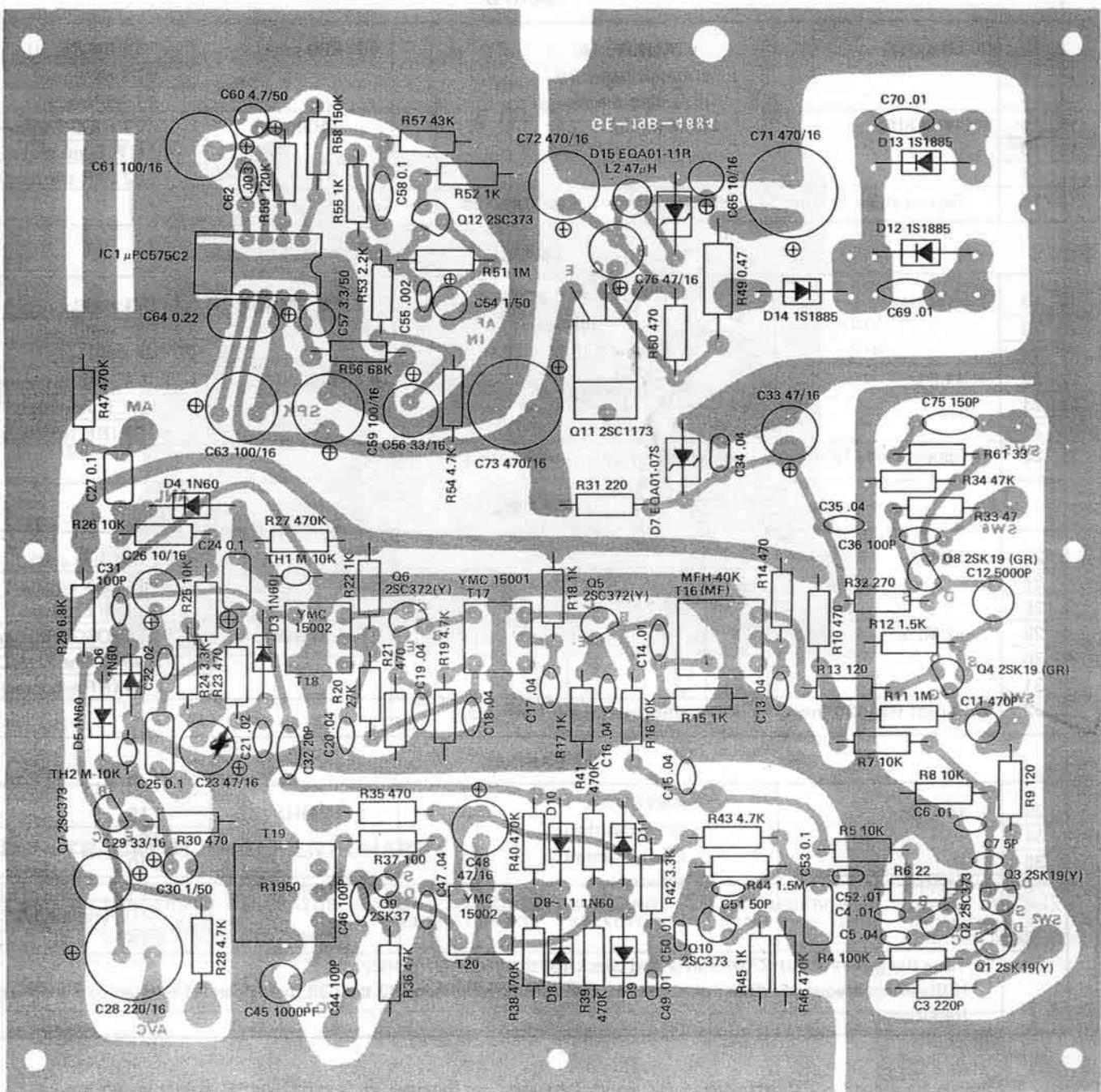
Step 2: Connect an antenna to the antenna terminals, then tune in a station to exactly the maximum reading on the S-meter.

Step 3: Set the AC VTVM to the 1.5 volt range. Connect the VTVM between T20 secondary and chassis ground.

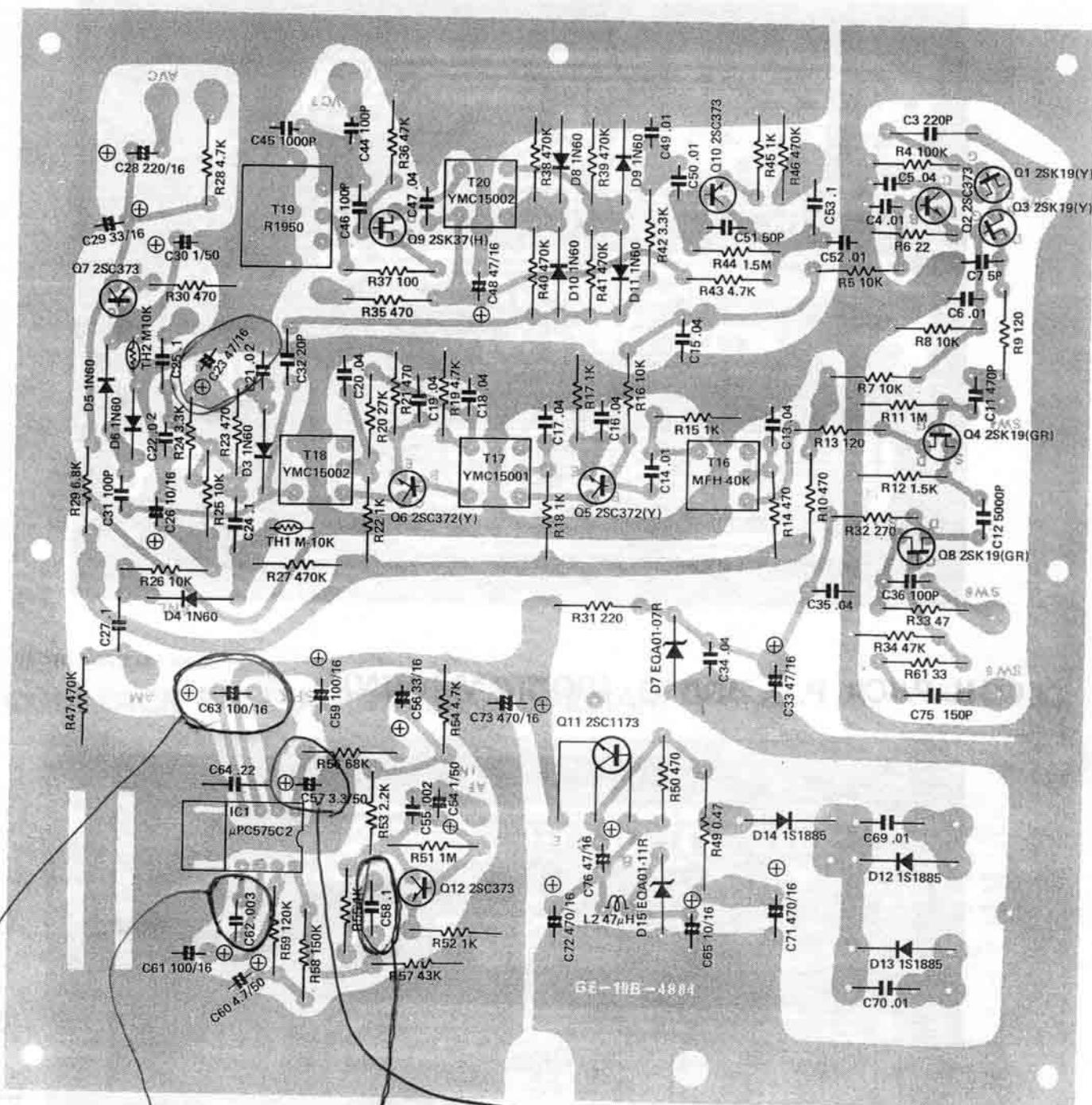
Step 4: Adjust the core of T19 for a zero beat note in the loudspeaker.

Step 5: Adjust the core of T20 for maximum VTVM deflection.

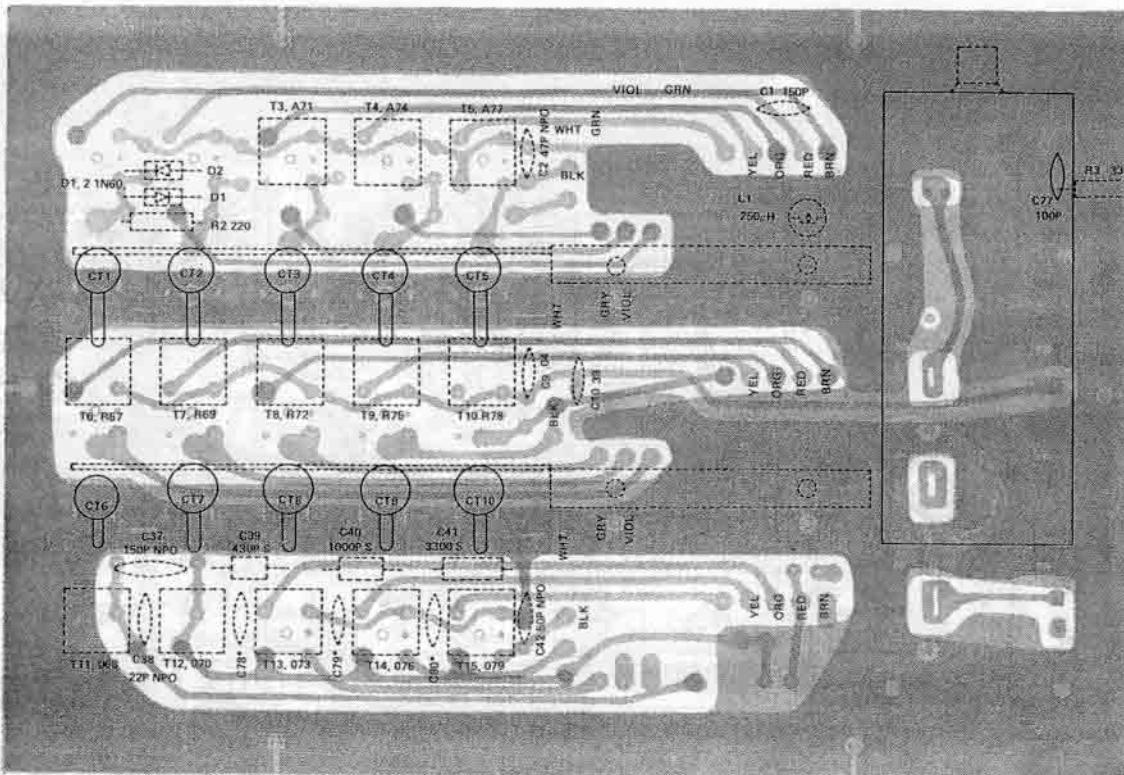
### MAIN P.C. BOARD (TOP VIEW)



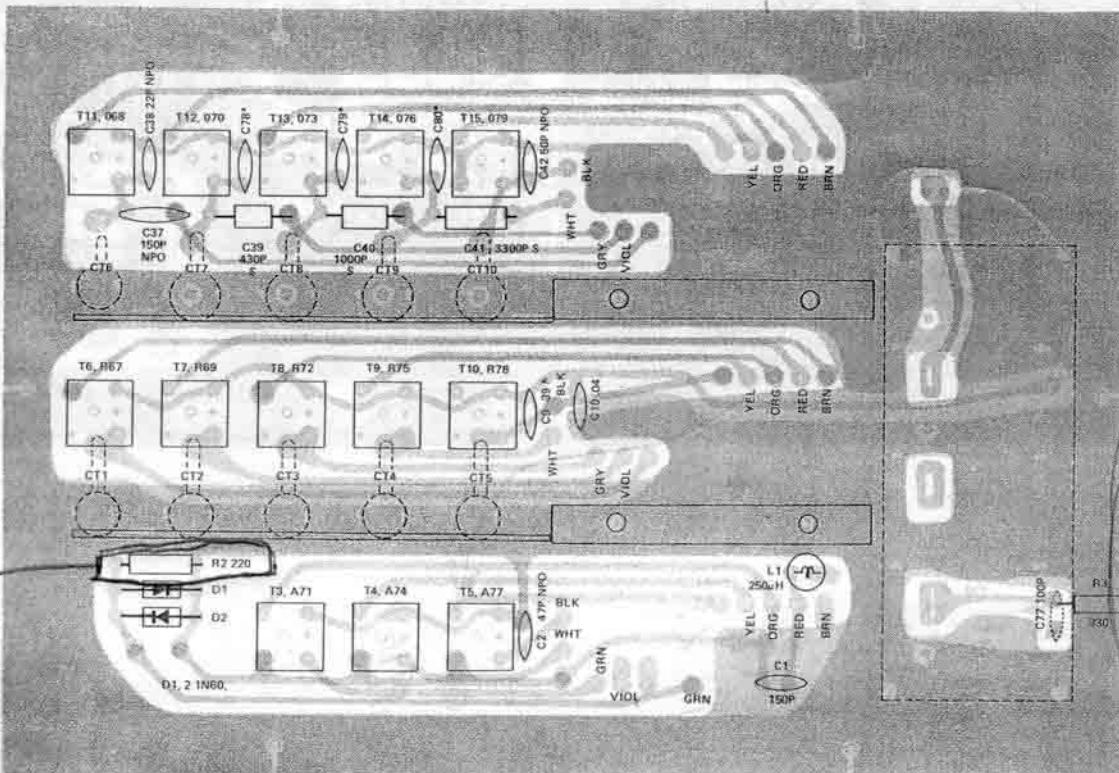
# MAIN P.C. BOARD (BOTTOM VIEW)



## COIL PACK P.C. BOARD (TOP VIEW)

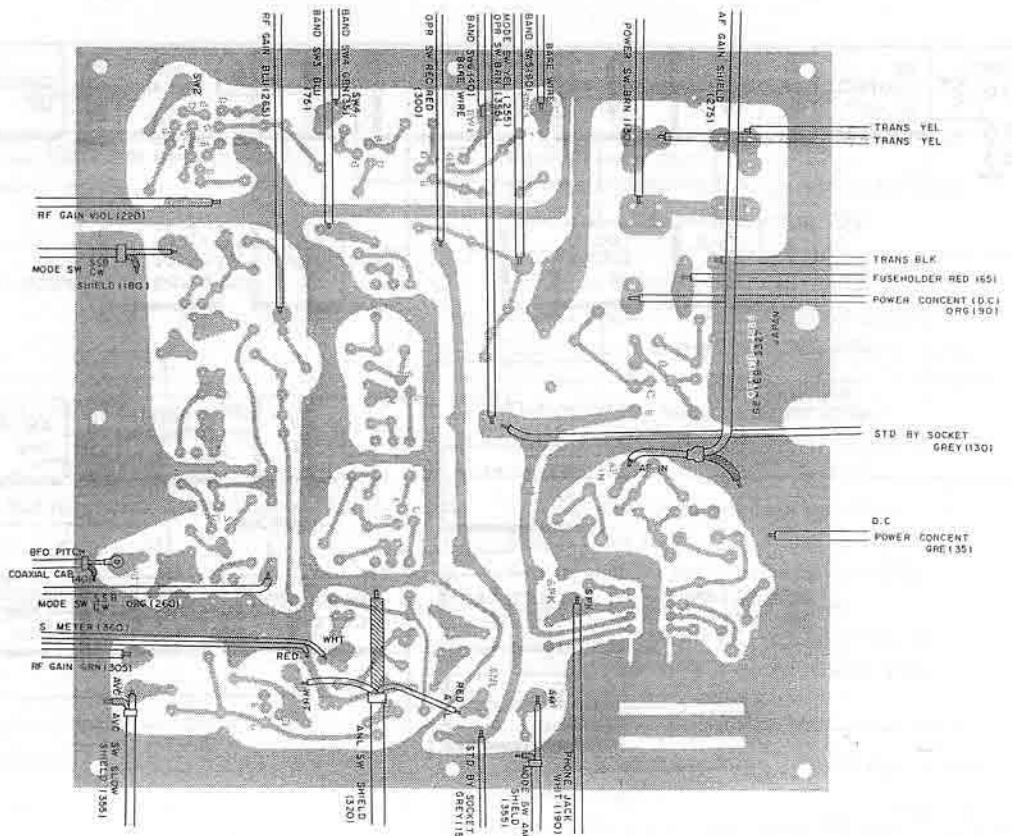


## COIL PACK P.C. BOARD (BOTTOM VIEW)

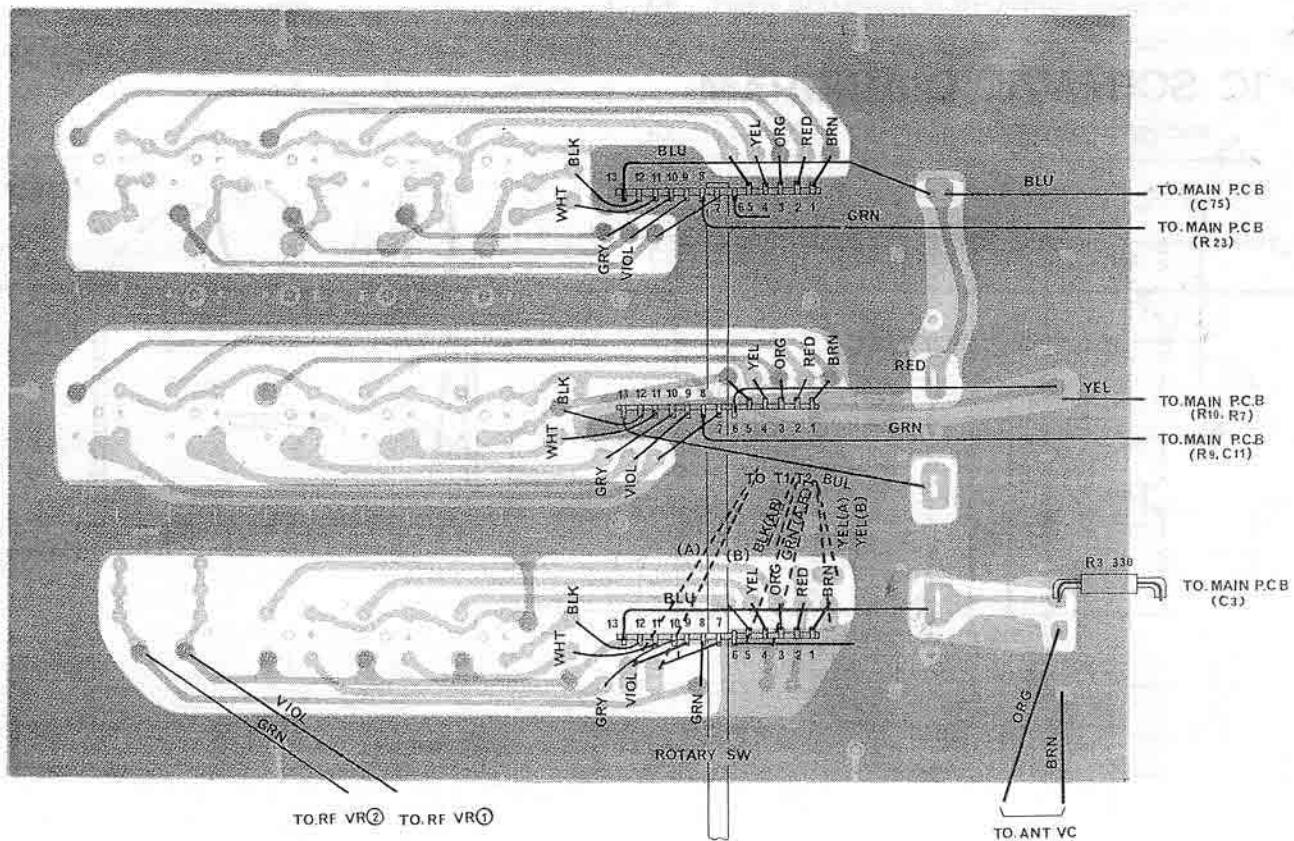


\* Deletion C78, C79, C80

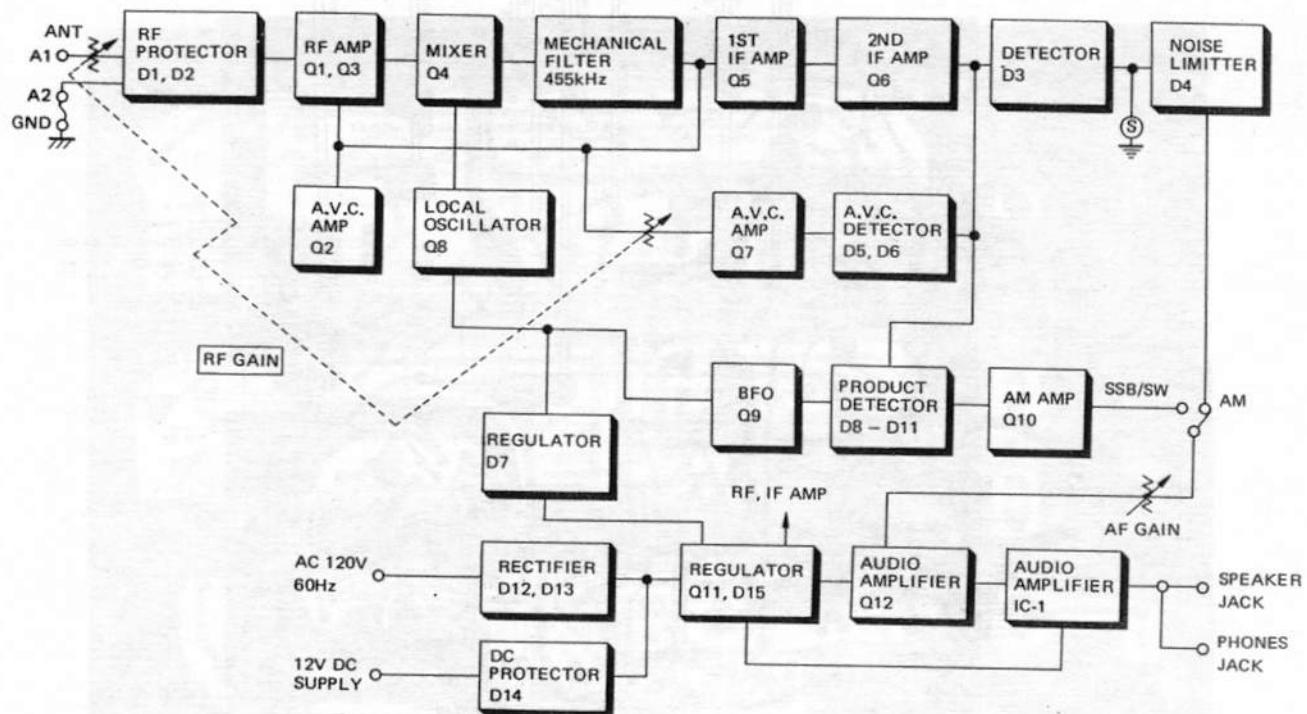
## MAIN P.C. BOARD WIRING DIAGRAM



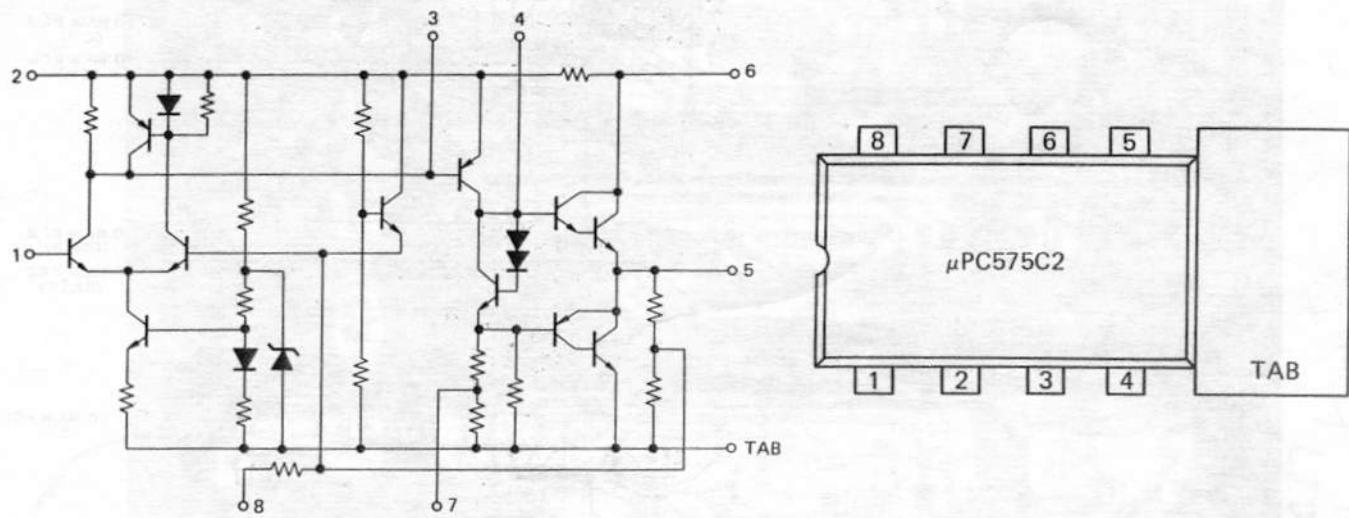
## COIL PACK P.C. BOARD WIRING DIAGRAM



## BLOCK DIAGRAM



## IC SCHEMATIC DIAGRAM



# TROUBLESHOOTING

TRB 21102

Symptom	Possible Cause
1) Pilot lamp does not light, nor does the unit function when power is ON.	A) Faulty power cord. B) Defective power switch on AF GAIN VR3. C) Defective power transformer T21.
2) Fuse blows when power is switched on.	A) Defective electrolytic capacitor C71. B) Short-circuit in the DC regulator circuit. C) Short-circuit in the power amplifier circuit.
3) Dial lamp and meter lamp do not light.	A) Defective dial lamp or meter lamp. B) Defective power switch on AF GAIN VR3.
4) Dial lamp glows but no sound is heard on any band.	A) Speaker jack or phone jack defective. B) Blown 0.5A fuse. C) Faulty speaker coupling capacitor C63 D) Power amplifier (IC1) defective. E) Short circuit in the DC regulator circuit. F) Faulty power switch on AF GAIN VR3. G) Faulty STD BY switch.
5) No audio on any band.	A) Defective local oscillator or oscillator circuit component. B) Faulty RF stage amplifier or RF stage amplifier circuit component.
6) BFO Control has no effect.	A) Defective MODE slide switch, SW9. B) Defective capacitor C45. C) Faulty BFO circuit or BFO circuit component.
7) S-meter not operating.	A) Defective S-meter B) Defective capacitor C23. C) Faulty AVC circuit or AVC circuit component.
8) Noisy	A) Defective RF stage amplifier. B) Defective IF stage amplifier. C) Defective AF amplifier IC1.

# PARTS LIST

*✓ = means change out to  
Black Gate E Series Cap.  
OR Panasonic FC  
Caps.*

Just  
Electrolytic  
Capacitors only!

Ref. No.	Description				RS Part Number	MFR's Part Number
	TYPE	UF	CAPACITORS Volts			
C1	Ceramic	150pF	±10%	50WV		FC-80
C2	Ceramic	47pF	±10%	50WV		FCC
C3	Styrol	220pF	±5%	50WV		S0A1H221J
C4	Ceramic	0.01μF	+80 -20%	25WV		MC-70
C5	Ceramic	0.04μF	+80 -20%	25WV		MC-100
C6	Ceramic	0.01μF	+80 -20%	25WV		MC-70
C7	Ceramic	5pF	±0.5pF	50WV		FC-50
C8	Not used					
C9	Ceramic	27pF	±10%	50WV		FCC
C10	Ceramic	0.04μF	+80 -20%	25WV		MC-100
C11	Styrol	470pF	±10%	50WV		S0C1H471K
C12	Styrol	5000pF	±5%	50WV		S0A1H502J
C13	Ceramic	0.04μF	+80 -20%	25WV		MC-100
C14	Ceramic	0.01μF	+80 -20%	25WV		FC-70
C15-20	Ceramic	0.04μF	+80 -20%	25WV		MC-100
C21, 22	Ceramic	0.02μF	+80 -20%	25WV		FC-70
C23	Electrolytic	47μF		16WV		CE04W1C470
C24, 25	Mylar	0.1μF	±20%	50WV		MS1H-104
C26	Electrolytic	10μF		16WV		CE04-W1C100
C27	Mylar	0.1μF	±20%	50WV		MS1H-104
C28	Electrolytic	220μF		16WV		CE04W1C221
C29	Electrolytic	33μF		16WV		CE04W1C330
C30	Electrolytic	1μF		50WV		CE04W1H010
C31	Ceramic	100pF	±10%	50WV		FC-70
C32	Ceramic	20pF	±10%	50WV		FC-50
C33	Electrolytic	47μF		16WV		CE04W1C470
C34	Mylar	0.04μF	±20%	50WV		MS1H-403
C35	Ceramic	0.04μF	+80 -20%	25WV		MC-100
C36	Ceramic	100pF	±10%	50WV		FCC
C37	Ceramic	150pF	±10%	50WV		FCC
C38	Ceramic	22pF	±10%	50WV		FCC
C39	Styrol	430pF	±5%	50WV		S0A1H431J
C40	Styrol	1000pF	±5%	50WV		S0A1H102J
C41	Styrol	3300pF	±5%	50WV		S0A1H332J
C42	Ceramic	50pF	±10%	50WV		FCC
C43	Styrol	3300pF	±5%	50WV		S0A1H332J
C44	Ceramic	100pF	±10%	50WV		FC-70
C45	Styrol	1000pF	±10%	50WV		S0C1H102K
C46	Ceramic	100pF	±10%	50WV		FCC
C47	Mylar	0.04μF	±20%	50WV		MS1H-403
C48	Electrolytic	47μF		16WV		CE04W1C470
C49, 50	Mylar	0.01μF	±20%	50WV		MS1H-103
C51	Ceramic	50pF	±10%	50WV		FC-60
C52	Mylar	0.01μF	±20%	50WV		MS1H103
C53	Mylar	0.1μF	±20%	50WV		MS1H-104
C54	Electrolytic	1μF		50WV		CE04W1H010
C55	Ceramic	0.002μF	+80 -20%	50WV		MC-50
C56	Electrolytic	33μF		16WV		CE04W1C330
C57	Electrolytic	3.3μF		50WV		CE04W1V3R3
C58	Ceramic	0.1μF	+80 -20%	25WV		MC-135

Ref. No.	Description				RS Part Number	MFR's Part Number
C59	Electrolytic	100 $\mu$ F		16WV		CE04W1C101
C60	Electrolytic	4.7 $\mu$ F		50WV		CE04W1V4R7
C61	Electrolytic	100 $\mu$ F		16WV		CE04W1C101
C62	Ceramic	0.003 $\mu$ F	+80 -20%	25WV		MC-50
C63	Electrolytic	100 $\mu$ F		16WV		CE04W1C101
C64	Mylar	0.22 $\mu$ F	$\pm$ 20%	50WV		MS1H-224
C65	Electrolytic	10 $\mu$ F		16WV		CE04W1C100
C66, 67	Not used					
C68	Ceramic	0.001 $\mu$ F	UL Listed	150WV		ECK DDL102ZE
C69, 70	Ceramic	0.01 $\mu$ F		500WV		CK2150
C71, 72, 73	Electrolytic	470 $\mu$ F		16WV		CE04W1C471
C74	Not used					
C75	Ceramic	150pF	$\pm$ 10%	50WV		FCC
C76	Electrolytic	47 $\mu$ F		16WV		CE04W1C470
C77	Ceramic	100pF	$\pm$ 10%	50WV		FC-70

### RESISTORS

R1	Carbon film	1.8M $\Omega$	$\pm$ 5%	1/2W		ERD-12TJ-185
R2	Carbon film	220 $\Omega$	$\pm$ 5%	1/4W		ERD-14TJ-221
R3	Carbon film	330 $\Omega$	$\pm$ 5%	1/4W		ERD-14TJ-331
R4	Carbon film	100K $\Omega$	$\pm$ 5%	1/4W		ERD-14TJ-104
R5	Carbon film	10K $\Omega$	$\pm$ 5%	1/4W		ERD-14TJ-103
R6	Carbon film	22 $\Omega$	$\pm$ 5%	1/4W		ERD-14TJ-220
R7, 8	Carbon film	10K $\Omega$	$\pm$ 5%	1/4W		ERD-14TJ-103
R9	Carbon film	120 $\Omega$	$\pm$ 5%	1/4W		ERD-14TJ-121
R10	Carbon film	470 $\Omega$	$\pm$ 5%	1/4W		ERD-14TJ-471
R11	Carbon film	1M $\Omega$	$\pm$ 5%	1/4W		ERD-14TJ-105
R12	Carbon film	1.5K $\Omega$	$\pm$ 5%	1/4W		ERD-14TJ-152
R13	Carbon film	120 $\Omega$	$\pm$ 5%	1/4W		ERD-14TJ-121
R14	Carbon film	470 $\Omega$	$\pm$ 5%	1/4W		ERD-14TJ-471
R15	Carbon film	1K $\Omega$	$\pm$ 5%	1/4W		ERD-14TJ-102
R16	Carbon film	10K $\Omega$	$\pm$ 5%	1/4W		ERD-14TJ-103
R17, 18	Carbon film	1K $\Omega$	$\pm$ 5%	1/4W		ERD-14TJ-102
R19	Carbon film	4.7K $\Omega$	$\pm$ 5%	1/4W		ERD-14TJ-472
R20	Carbon film	27K $\Omega$	$\pm$ 5%	1/4W		ERD-14TJ-273
R21	Carbon film	470 $\Omega$	$\pm$ 5%	1/4W		ERD-14TJ-471
R22	Carbon film	1K $\Omega$	$\pm$ 5%	1/4W		ERD-14TJ-102
R23	Carbon film	470 $\Omega$	$\pm$ 5%	1/4W		ERD-14TJ-471
R24	Carbon film	3.3K $\Omega$	$\pm$ 5%	1/4W		ERD-14TJ-332
R25, 26	Carbon film	10K $\Omega$	$\pm$ 5%	1/4W		ERD-14TJ-103
R27	Carbon film	470K $\Omega$	$\pm$ 5%	1/4W		ERD-14TJ-474
R28	Carbon film	4.7K $\Omega$	$\pm$ 5%	1/4W		ERD-14TJ-472
R29	Carbon film	6.8K $\Omega$	$\pm$ 5%	1/4W		ERD-14TJ-682
R30	Carbon film	470 $\Omega$	$\pm$ 5%	1/4W		ERD-14TJ-471
R31	Carbon film	220 $\Omega$	$\pm$ 5%	1/4W		ERD-14TJ-221
R32	Carbon film	270 $\Omega$	$\pm$ 5%	1/4W		ERD-14TJ-271
R33	Carbon film	47 $\Omega$	$\pm$ 5%	1/4W		ERD-14TJ-470
R34	Carbon film	47K $\Omega$	$\pm$ 5%	1/4W		ERD-14TJ-473
R35	Carbon film	470 $\Omega$	$\pm$ 5%	1/4W		ERD-14TJ-471
R36	Carbon film	47K $\Omega$	$\pm$ 5%	1/4W		ERD-14TJ-473
R37	Carbon film	100 $\Omega$	$\pm$ 5%	1/4W		ERD-14TJ-101
R38-41	Carbon film	470K $\Omega$	$\pm$ 5%	1/4W		ERD-14TJ-474

Change  
TO  
5K Ohms

Ref. No.	Description				RS Part Number	MFR's Part Number
R42	Carbon film	3.3KΩ	±5%	1/4W		ERD-14TJ-332
R43	Carbon film	4.7KΩ	±5%	1/4W		ERD-14TJ-472
R44	Carbon film	1.5MΩ	±5%	1/4W		ERD-14TJ-155
R45	Carbon film	1KΩ	±5%	1/4W		ERD-14TJ-102
R46, 47	Carbon film	470KΩ	±5%	1/4W		ERD-14TJ-474
R48	Carbon film	1.8MΩ	±5%	1/2W		ERD-12TJ-185
R49	Carbon film	0.47Ω	±5%	1W		ERX1ANJ0.47
R50	Carbon film	470Ω	±5%	1/4W		ERD-14TJ-471
R51	Carbon film	1MΩ	±5%	1/4W		ERD-14TJ-105
R52	Carbon film	1KΩ	±5%	1/4W		ERD-14TJ-102
R53	Carbon film	2.2KΩ	±5%	1/4W		ERD-14TJ-222
R54	Carbon film	4.7KΩ	±5%	1/4W		ERD-14TJ-472
R55	Carbon film	1KΩ	±5%	1/4W		ERD-14TJ-102
R56	Carbon film	68KΩ	±5%	1/4W		ERD-14TJ-683
R57	Carbon film	43KΩ	±5%	1/4W		ERD-14TJ-433
R58	Carbon film	150KΩ	±5%	1/4W		ERD-14TJ-154
R59	Carbon film	120KΩ	±5%	1/4W		ERD-14TJ-124
R60	Carbon film	82Ω	±5%	1/4W		ERD-14TJ-820
R61	Carbon film	33Ω	±5%	1/4W		ERD-14TJ-330
R62	Carbon film	33KΩ	±5%	1/4W		ERD-14TJ-333

#### COILS/TRANSFORMERS/FILTERS

T1, 2	A, B BAND	BAR Antenna coil	CA-3003	12BNA-066
T3	C BAND	Antenna coil	CA-3004	6PNA-071
T4	D BAND	Antenna coil	CA-3005	6PNA-074
T5	E BAND	Antenna coil	CA-3006	6PNA-077
T6	A BAND	RF coil	CA-4470	6PNR067
T7	B BAND	RF coil	CA-4471	6PNR-069
T8	C BAND	RF coil	CA-4472	6PNR-072
T9	D BAND	RF coil	CA-4473	6PNR-075
T10	E BAND	RF coil	CA-4474	6PNR-078
T11	A BAND	OSC coil	CA-4465	6PNO-068
T12	B BAND	OSC coil	CA-4466	6PNO-070
T13	C BAND	OSC coil	CA-4467	6PNO-073
T14	D BAND	OSC coil	CA-4468	6PNO-076
T15	E BAND	OSC coil	CA-4469	6PNO-079
T16	455 kHz Mechanical Filter		CA-3009	MFH-40K
T17	455 kHz IFT		CA-7306	YMC-15001
T18	455 kHz IFT		CA-3008	YMC-15002
T19	BFO coil		CA-3007	R1950
T20	455 kHz IFT		CA-3008	YMC-15002
T21	Power Trans (U.S.A. model) UL Listed		TA-0417	Y-0136
	Power Trans (Canada model) CSA Listed			K-2635
	Power Trans (Australia and Europe model)			K-3639
L1	RFC 250μH			LF1-251
L2	RFC 47μH			LF1-470

Ref. No.	Description			RS Part Number	MFR's Part Number
POTENTIOMETERS					
VR1, 2	RF Gain control			P-0725	2KBX2(GJ10A)
VR3	AF Gain control			P-0726	5KA(VJ11ASF21)
SEMICONDUCTORS					
D1-6	Diode	Germanum			1N60
D7	Diode	Zener 7V			EQA01-07R
D8-11	Diode	Germanum			1N60
D12-14	Diode	Silicon			1S1885
D15	Diode	Zener 11V			EQA01-11R
IC1	IC	NEC			$\mu$ PC575C2
Q1	Transistor	Silicon	Toshiba		2SK19(Y)
Q2	Transistor	Silicon	Toshiba		2SC373
Q3	Transistor	Silicon	F.E.T.	Toshiba	2SK19(Y)
Q4	Transistor	Silicon	F.E.T.	Toshiba	2SK19(GR)
Q5, 6	Transistor	Silicon		Toshiba	2SC372(Y)
Q7	Transistor	Silicon		Toshiba	2SC373
Q8	Transistor	Silicon	F.E.T.	Toshiba	2SK19(GR)
Q9	Transistor	Silicon	F.E.T.	NEC	2SK37 or 2SK19
Q10	Transistor	Silicon		Toshiba	2SC373
Q11	Transistor	Silicon		Toshiba	2SC1173(C)
Q12	Transistor	Silicon		Toshiba	2SC373
Th-1, 2	Thermistor				M-10K
SWITCHES					
SW1-6	BAND Selector switch Y-394			\$-1130	GE-18C-4093
SW7-10	ANL/MODE/AVC/OPR			S-2202	6P14L Slide
VARIABLE CAPACITORS/TRIMMER CAPACITORS					
VC1	ANT TRIMMER			C-4469	GE-18D-4083
VC2, 4, 6	MAIN Tuning 3gangs			C-4467	7MD34X24A
VC3, 5	BAND SPREAD Tuning 2gangs			C-4468	GE-18D-4082
VC7	BFO PITCH			C-4469	GE-18D-4083
CT1-6	RF PC Trimmer			CA-4463	EVC-12W30P32
CT7-10	OSC PC Trimmer			CA-4464	AT1-6
MISCELLANEOUS					
	Chassis				GE-19A-4854
	Front chassis				GE-19A-4870
	Cabinet		Z-1700		GE-15B-2256
	Bottom Plate		Z-1701		GE-11C-535A
	Back Board		Z-1702		GE-17C-3387
	Front Panel		Z-1703		GE-18C-4068
	Tuning Dial Plate		G-0142		GE-18C-4069
	Band Spread Dial Plate		G-0143		GE-18D-4070
	Tuning Dial Shaft		D-3115		GE-18D-4072
	Band Spread Dial Shaft		D-3114		GE-18D-4071

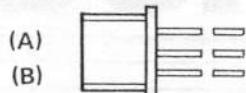
Ref. No.	Description	RS Part Number	MFR's Part Number
	Dial Spread Shaft	D-3116	GE-12D-728
	Band Spread Sleeve		9φ
	Pully Stud	HB-0440	GE-11C-543A
	Rotary Switch Bearing	HB-0442	GE-11C-575(1)
	Flywheel	RA-3185	GE-12D-734
	Pully 40φ	RA-2408	
	Pully 70φ	RA-2409	
	Pully 90φ	RA-2410	
	Dial Back Panel		GE-19B-4871
	Main Dial Pointer		GE-19D-4881
	Spread Dial Pointer		GE-19D-4931
	Shield Bar	HB-0446	GE-11C-609
	Main P.C. Board UL Type		GE-19B-4884
	Coil Pack P.C. Board	V-4682	GE-18D-3966
	S Meter	M-0233	KL218L59
	Fuse Holder	F-1092	SN-2055
	3P Power Connector	J-0567	No. 1476
	2P Lug & Socket	J-6236	No. 3822
	3P Screws Terminal	KJ-4327	3-210
	Phone Jacks	J-0568	L-J079
	Speaker Jack	J-0569	SG7615
	Lamp Grommet	HB-0449	No. 4108 10φ
	Lamp Grommet (Band Spread Dial)		GE-19D-4924
	Bar Antenna Holder	HB-0450	
	Plastic Foot	F-0139	No. 7003
	Fuse 0.5A Cartridge Type	HF-0079	
	Lead Lamp 7V 50mA	L-0470	L=90mm
	Lead Lamp 7V 50mA	L-0471	L=440mm
	Line Cord (U.S.A. model) UL Listed	W-1670	BLK 6 Feet
	Line Code (Canada model)		UP329-3
	Line Code (Europe model)		#1212
	Line Code (Australia model)		N999
	Line Cord Strain Relief UL Listed	HB-0451	SR-3P-4
	Dial Spring 9L	RA-5996	
	Dial Spring 5L	RA-5997	
	Nylon Pully	RA-2411	7009
	Tuning Knob	K-1497	GE-18D-4073
	Control Knob	K-1498	GE-18D-4074
	Terminal Strip 1L1P UL Type	J-4328	
	Terminal Strip 1L1P	J-4329	
	AMP Terminal UL Listed		#36964

#### SPEAKER BOX

	Speaker	S-4478	
	Speaker Box	Z-1704	
	Box Rear Plate	Z-1705	
	Front Panel	Z-1706	
	1/4" Plug W/Cord		
	Screws 1 Kit	HB-0455	

# SEMICONDUCTOR LEAD IDENTIFICATION

- (A): 2SC372(Y), 2SC373
- (B): 2SK19(Y), 2SK19(GR)
- (C): 2SC1173(C)
- (D): 2SK37

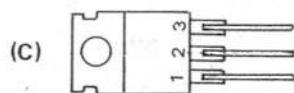


(A)

- 1. Emitter
- 2. Collector
- 3. Base

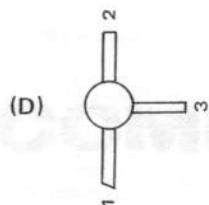
(B)

- 1. Drain
- 2. Source
- 3. Gate



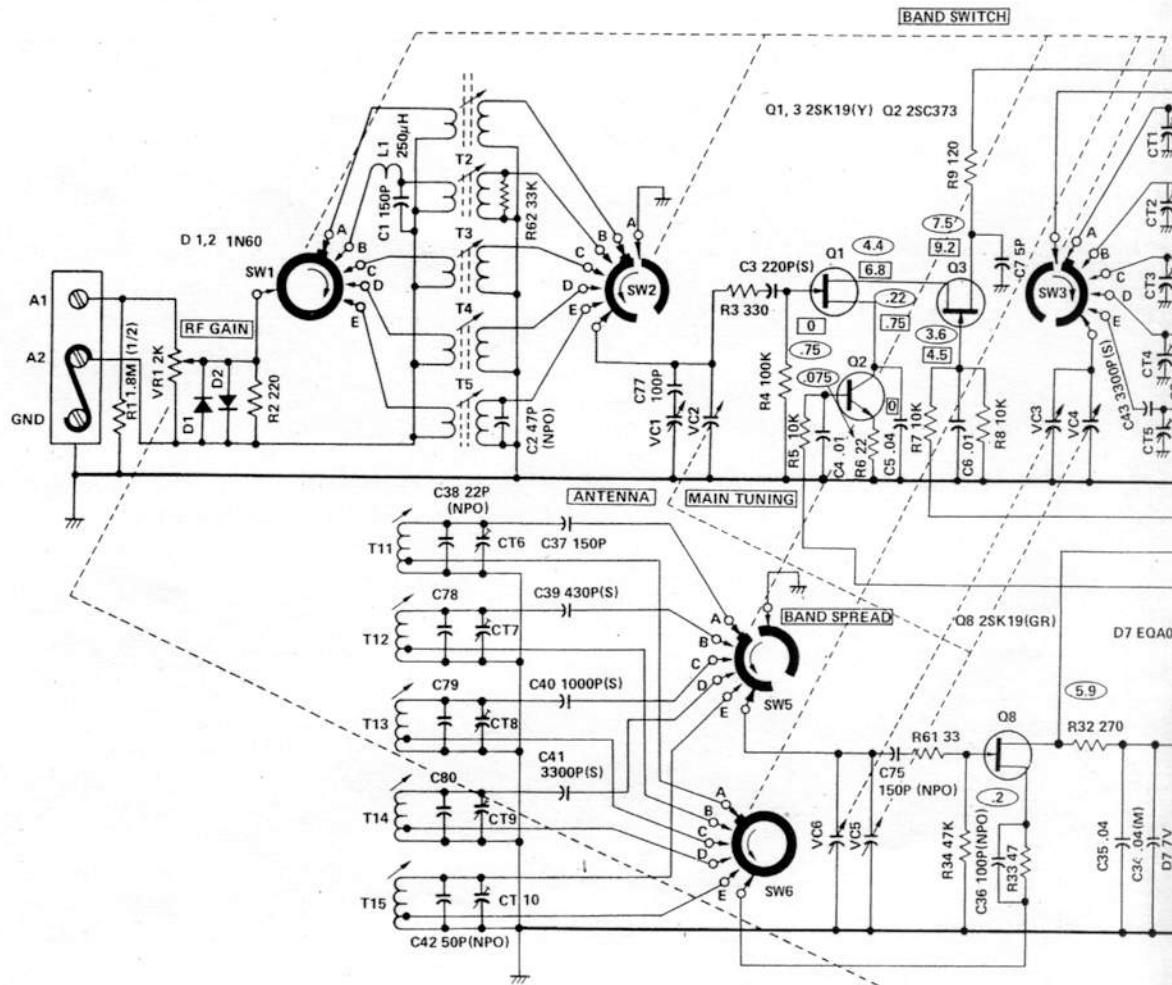
(C)

- 1. Base
- 2. Collector (Heat Sink)
- 3. Emitter

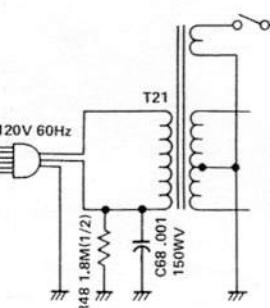


(D)

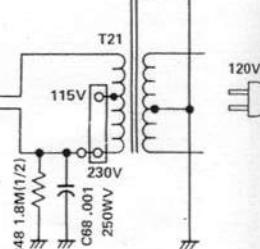
- 1. Source
- 2. Drain
- 3. Gate



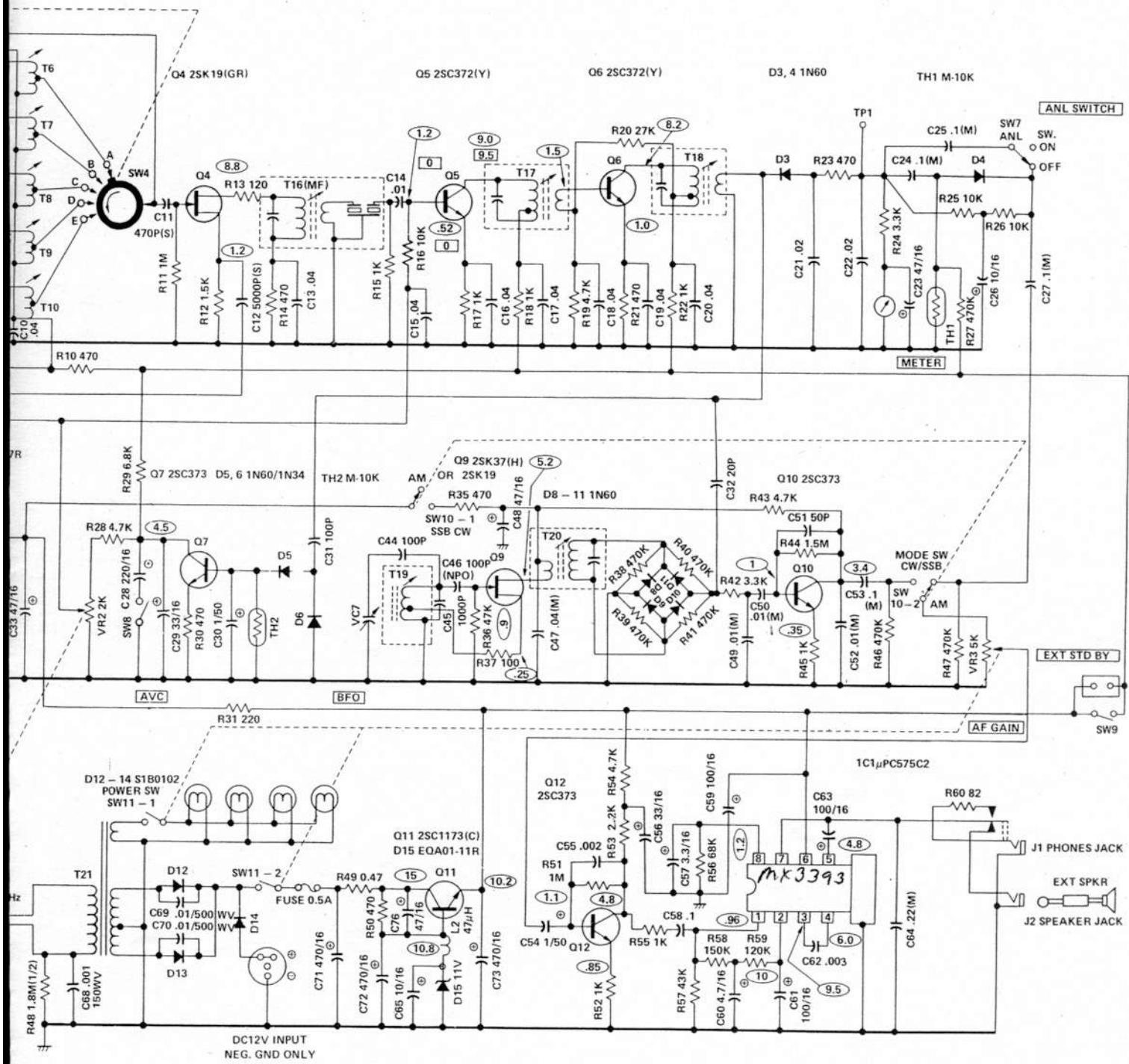
POWER LINE FOR CSA MODEL



POWER LINE FOR 115 - 230V MODEL



## CHEMATIC DIAGRAM



RADIO SHACK  A TANDY CORPORATION COMPANY

**TANDY CORPORATION**

## AUSTRALIA

## BELGIUM

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